

Patent Abstracts of Japan

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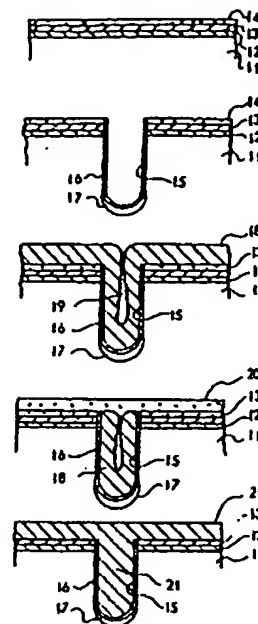
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TITLE : MANUFACTURE OF
SEMICONDUCTOR DEVICE



ABSTRACT : PURPOSE: To make it possible to fill completely the interior of a groove with an insulating film without causing a crystal defect as well as to facilitate the manufacturing process of a semiconductor device by a method wherein, after an Si oxide film is deposited in the groove of an Si substrate, a thin polySi film having a good coverage is formed and this polySi film is oxidized.

CONSTITUTION: An Si oxide film 16 is deposited in a groove of an Si substrate 11 with a polySi film 14 formed on its surface and thereafter, a second thin polySi film having a good coverage is formed and this polySi film 20 is oxidized. Thereby, a void 19 can be filled completely and moreover, as the absolute amount of oxidation is little, a stress is not generated by oxidation and no crystal defect is generated. Furthermore, as the first formed film 14 functions as a stopper at the time of dry etching or polishing of the film 16, the manufacture of a semiconductor device is facilitated.

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